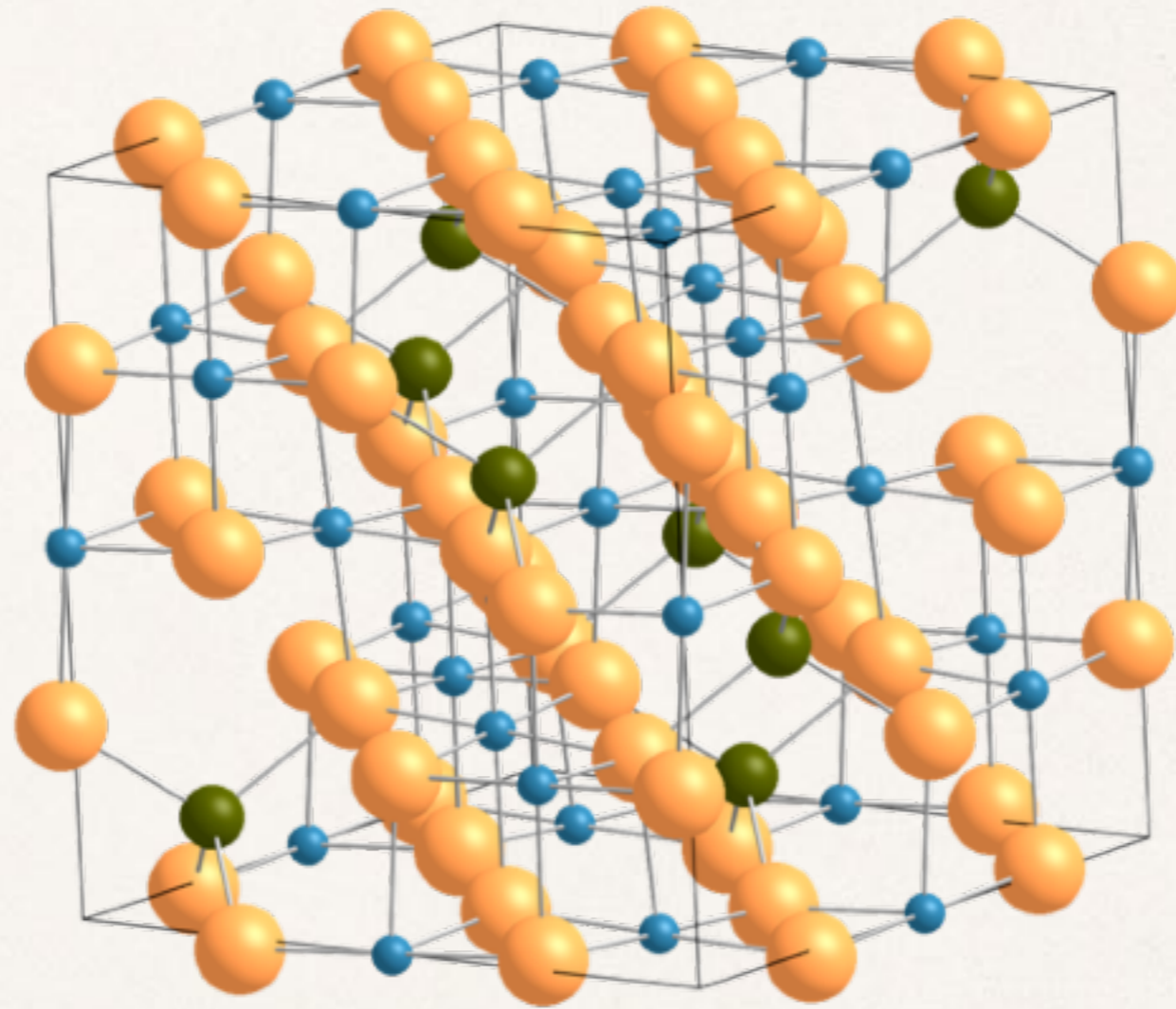


\*  $A_3X_4$  — spinel  $MgAl_2O_4$



Spinel,  $MgAl_2O_4$ .

Normal spinel structure: divalent metal ions ( $Mg^{2+}$ ) in tetrahedral sites; trivalent metal ions ( $Al^{3+}$ ) in octahedral sites.

The crystal structure consists of an almost cubic-close-packed array of oxygen ions, with magnesium and aluminum ions in tetrahedral and octahedral vacancies, respectively.